

ASYMMETRIC DATA PATH MEDIA ACCESS CONTROLLER

5 ABSTRACT OF THE DISCLOSURE

10 A method and apparatus for maintaining data throughput in
a data element includes receiving a clock and a first plurality
of instances of data having a first width on an input, sampling
consecutive ones of instances of the data having the first width
at consecutive ones of a first rising edge and a first falling
edge of the clock, respectively, to generate two plurality of
instances of sampled data having a first width. The plurality
of instances of sampled data is then sampled at a second rising
edge of the clock and parallelized to generate a second
15 plurality of instances of parallel data having a second width
greater than the first width. The parallel data may then be
processed to for example generate statistics to monitor link
integrity, prior to being transmitted. A 10 Gbps data
20 transmission speed may be maintained using the IEEE 802.3ae-
specified media independent interface clock.

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